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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/574,253	03/30/2006	Hideo Morimoto	07700072001	9066
22511	7590	11/01/2007		
OSHA LIANG L.L.P. 1221 MCKINNEY STREET SUITE 2800 HOUSTON, TX 77010			EXAMINER PATEL, PUNAM	
			ART UNIT 2855	PAPER NUMBER
			NOTIFICATION DATE 11/01/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@oshaliang.com
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Office Action Summary

Application No.

10/574,253

Applicant(s)

MORIMOTO, HIDEO

Examiner

Punam Patel

Art Unit

2855

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 10-12 is/are rejected.
- 7) ☒ Claim(s) 7-9 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>10/04/07 & 03/30/06</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Drawings

Figures 21, 22, and 23A to 23C should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 10-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 10 recites the limitation "the strain gauges" in line 2 of the claim. There is insufficient antecedent basis for this limitation in the claim. It is unclear as to which strain gauges are being referred to (I.e. the eight strain gauges of a single sensor unit or all strain gauges of the entire sensor). Furthermore, how can all of the strain gauges be disposed on outer

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edge and an inner edge simultaneously? Are some strain gauges on an outer edge and some on an inner edge? Applicant is advised to clarify by including such limitations.

Claim 10 recites the limitation "the diaphragm" in line 4 of the claim. There is insufficient antecedent basis for this limitation in the claim. Applicant is advised to include language similar of claim 3 to provide proper antecedent basis, or change the dependency of claim 5 to claim 3.

Claim 11 recites the limitation "the strain gauges" in line 3 of the claim. There is insufficient antecedent basis for this limitation in the claim. It is unclear as to which strain gauges are being referred to (I.e. the eight strain gauges of a single sensor unit or all strain gauges of the entire sensor).

Claim 12 recites the limitation "the force receiving portion" in line 3 of the claim. There is insufficient antecedent basis for this limitation in the claim. Applicant is advised to include language similar of claim 11 to provide proper antecedent basis, or change the dependency of claim 12 to claim 11.

Claim 12 recites the limitation of "the sensor comprises the multiaxial sensor units" in line 2 of the claim. This limitation is already present in Claim 5. Is the limitation providing additional sensor units to the ones already recited in Claim 5?

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Crane et al. (US 3,915,015).

With respect to Claim 1, Crane et al. teach a sensing apparatus comprising eight strain gauges (Fig. 8, #s 21-28) disposed on a single plane (#12) and a bridge circuit constructed by connecting the strain gauges (col. 8, lines 5-24).

With respect to Claim 3, Crane et al. teach the sensing apparatus comprising:
a strain generation body comprising a force receiving portion provided at the center (#14), a fixed portion provided on an outer circumference (#10), and an annular diaphragm portion (#12) connecting the force receiving portion (#14) and the fixed portion (#10) to each other (See Figs 1-2); and

the strain gauges (#s 21-28) are disposed at four positions on outer and inner edges of the diaphragm (#12) on line perpendicular (understood to be the x-axis) to a center line (understood to be the z-axis) of the diaphragm; and at four positions on the outer and inner edges of the diaphragm on a line perpendicular (understood to be the y-axis) to the line perpendicular (x-axis) to the center line (z-axis) of the diaphragm. See Figure 8.

Claims 1 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Carignan (US 5,339,696).

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With respect to Claim 1, Carignan discloses a sensing apparatus comprising eight strain gauges (Fig. 8, #s 100, 102, 104, and 106 & col. 5, lines 42-45) disposed on a single plane (Fig. 8, #38) and a bridge circuit constructed by connecting the strain gauges (Fig. 9):

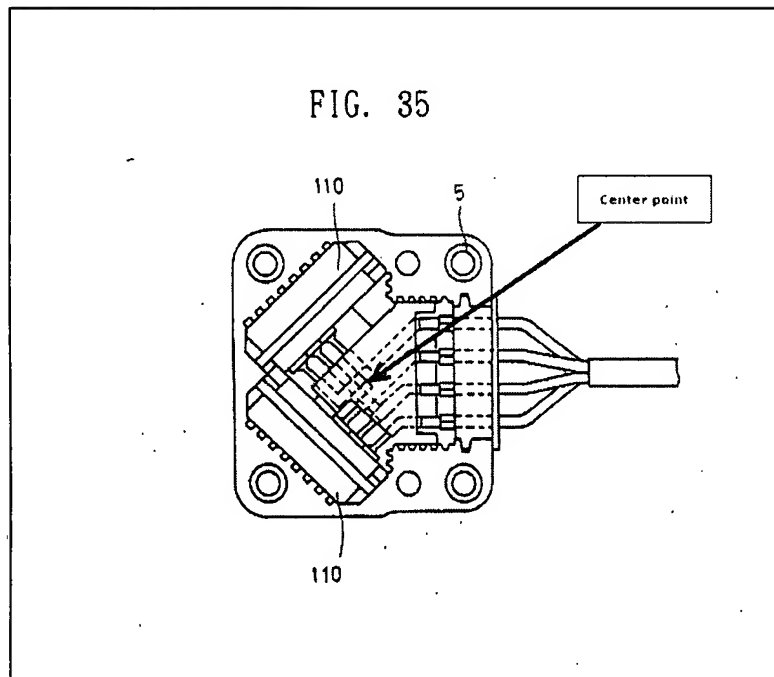
With respect to Claim 5, Carignan discloses the plane (#38) comprising a second set of eight strain gauges (Fig. 8, #s 108, 110, 112, and 114) and another bridge circuit connecting the second set of eight strain gauges (Fig. 10).

Claims 1, 4, and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Tai et al. (US 5,408,112).

With respect to Claims 1 and 4, Tai et al. teach a sensor chip (Fig. 1, #10A, the sensor chip) comprising eight piezo-resistive strain gauges (Fig. 4, #s 18a-b, 19a-b, 20a-b, and 21a-b) disposed on a single plane and a bridge circuit constructed by connecting the strain gauges (Fig. 9 & col. 7, lines 49-51).

With respect to Claim 5, Tai et al. teach a sensor (Fig. 35) comprising a plurality of sensing chips (#s 110 & col. 15, lines 12-14 and 27).

With respect to Claim 6, Tai et al. teach the sensor (Fig. 35), wherein the sensor chips (#s 110, 10A) are disposed around a center point of the sensor at regular angular intervals at the same distance from the center point (See Fig. 35 below).



Claim 2 is rejected under 35 U.S.C. 102(b) as being anticipated by Amazeen et al. (US 4,745,812).

With respect to Claim 2, Amazeen et al. teach a sensing apparatus comprising eight strain gauges (Fig. 11, PZR1-PZR8) disposed on a single plane (#12) and two bridge circuits constructed by connecting the strain gauges (Fig. 12).

Allowable Subject Matter

Claims 7-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Claims 10-12 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

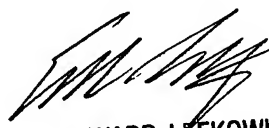
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Punam Patel whose telephone number is (571) 272-6794. The examiner can normally be reached on Monday to Friday 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on (571) 272-2180. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PP
10/25/2007


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